AMENDMENTS TO THE CLAIMS

This listing of the claims replaces all prior listings and versions:

1. (currently amended): A non-naturally-occurring protein comprising a modified plant zinc finger protein (ZFP), the modified plant ZFP having a modified amino acid sequence as compared to a naturally occurring plant ZFP and comprising a tandem array of a plurality of zinc fingers, each zinc finger comprising a recognition region and a backbone region, wherein

(i) there are between about 5 and 50 amino acids in the backbone region of each zinc finger and wherein the backbone region is not derived from *zif268* or *Xenopus* TFIIIA ~~between adjacent zinc fingers of the modified plant ZFP~~; and

(ii)~~, and further wherein~~ the modified plant zinc finger protein is engineered to bind to a target sequence.

2. (previously presented) The isolated polynucleotide of claim 17, wherein the target sequence is a nucleic acid sequence.

3. (previously presented) The isolated polynucleotide of claim 2, wherein the nucleic acid is DNA.

4. (previously presented) The isolated polynucleotide of claim 2, wherein the target sequence is 3 or more contiguous nucleotides.

5. (canceled)

6. (previously presented) The isolated polynucleotide of claim 17, wherein one or more of the zinc fingers of the ZFP are obtained by rational design.

7. (previously presented) The isolated polynucleotide of claim 17, wherein one or more of the zinc fingers of the ZFP are obtained by selection.

8. (previously presented) The isolated polynucleotide of claim 7, wherein selection is phage display, interaction trap, ribosome display or RNA-peptide fusion.

9. (previously presented) The isolated polynucleotide of claim 17, wherein one or more of the zinc fingers comprise canonical C_2H_2 zinc fingers.

10. (previously presented) The isolated polynucleotide of claim 17, wherein one or more of the zinc fingers comprise non-canonical zinc fingers.

11. (previously presented) The isolated polynucleotide of claim 17, wherein one or more of the zinc fingers are derived from two or more plant species.

12 to 13. (canceled)

14. (previously presented) The isolated polynucleotide of claim 17 further encoding a functional domain selected from the group consisting of p300, CBP, PCAF,SRC1 PvALF, ERF-2, OsGAI, HALF-1, C1, AP1, ARF-5, ARF-6, ARF-7, ARF-8, CPRF1, CPRF4, MYC-RP/GP, and TRAB1.

15 to 16. (canceled)

17. (previously presented) An isolated polynucleotide encoding a modified plant zinc finger protein according to claim 1.

18. (original) An expression vector comprising the isolated polynucleotide of claim 17.

19. (original) A host cell comprising the isolated polynucleotide of claim 17.

20. (canceled).

21. (currently amended): A non-naturally-occurring protein comprising a modified plant zinc finger protein (ZFP) engineered to bind to a target sequence, the modified plant zinc finger protein comprising a plurality of zinc fingers, each zinc finger comprising an amino acid recognition region which binds to a target subsite of the target sequence, wherein the zinc finger protein ~~modification~~ comprises one or more amino acid substitutions in the recognition region of one or more of the zinc fingers of the modified plant ZFP as compared to a naturally occurring plant zinc finger protein.

22. (previously presented): An isolated polynucleotide encoding a modified plant zinc finger protein according to claim 21.

23. (previously presented): The isolated polynucleotide of claim 22, wherein the target sequence is a nucleic acid sequence.

24. (previously presented): The isolated polynucleotide of claim 23, wherein the nucleic acid is DNA.

25. (previously presented): The isolated polynucleotide of claim 23, wherein the target sequence is 3 or more contiguous nucleotides.

26. (previously presented): The isolated polynucleotide of claim 22, wherein the modified zinc finger protein comprises a tandem array of zinc fingers.

27. (previously presented): The isolated polynucleotide of claim 22, wherein one or more of the zinc fingers of the ZFP are obtained by rational design.

28. (previously presented): The isolated polynucleotide of claim 22, wherein one or more of the zinc fingers of the ZFP are obtained by selection.

29. (previously presented): The isolated polynucleotide of claim 28, wherein selection is phage display, interaction trap, ribosome display or RNA-peptide fusion.

30. (previously presented): The isolated polynucleotide of claim 22, wherein one or more of the zinc fingers comprise canonical C_2H_2 zinc fingers.

31. (previously presented): The isolated polynucleotide of claim 22, wherein one or more of the zinc fingers comprise non-canonical zinc fingers.

32. (previously presented): The isolated polynucleotide of claim 22, wherein one or more of the zinc fingers are derived from two or more plant species.

33. (previously presented): The isolated polynucleotide of claim 22, further encoding a functional domain selected from the group consisting of p300, CBP, PCAF,SRC1 PvALF, ERF-2, OsGAI, HALF-1, C1, AP1, ARF-5, ARF-6, ARF-7, ARF-8, CPRF1, CPRF4, MYC-RP/GP, and TRAB1.